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United States Patent [19][11] **Patent Number:** **5,279,511**

DiSanto et al.

[45] **Date of Patent:** **Jan. 18, 1994****[54] METHOD OF FILLING AN
ELECTROPHORETIC DISPLAY****[75] Inventors:** **Frank J. DiSanto**, North Hills; **Denis A. Krusos**, Lloyd Harbor, both of N.Y.**[73] Assignee:** **Copytele, Inc.**, Huntington Station, N.Y.**[21] Appl. No.:** **964,350****[22] Filed:** **Oct. 21, 1992****[51] Int. Cl.⁵** **C25D 13/00****[52] U.S. Cl.** **445/24; 204/181.6;**
204/181.7; 204/299 EC**[58] Field of Search** **445/24; 204/181.7,**
181.6, 204/300 PE, 299 PE, 299 EC**[56] References Cited****U.S. PATENT DOCUMENTS**

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The present invention is a method of filling the interstice between the anode structure and the cathode structure of an electrophoretic image display (EPID) with a fluid dispersion containing solid pigment particles. And more specifically, a method of filling such EPIDs when the interstice between the anode structure and the cathode structure is less than 0.007 inches. The present invention method includes the steps of coating the anode structure with pigment particles prior to the assembly of the anode structure or cathode structure into the EPID. After the pigment particle coated anode or cathode structure has been assembled into the EPID, the EPID is filled with a suspension medium lacking any pigment particles. An electrophoretic effect is then created within the EPID causing the pigment particles to migrate away from the anode or cathode structure they coat, thereby becoming disperse within the suspension medium.

20 Claims, 5 Drawing Sheets